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| 10/779,728 | 02/18/2004 | Tokuro Ozawa | 118458 | 1726 |
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| OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320 | | | AMINI, JAVID A | |
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DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/779,728

Applicant(s)

OZAWA, TOKURO

Examiner

Javid A. Amini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/18/04-5/26/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the independent claims Applicant uses the term "switching" which is not clear what Applicant considers as a switch, because the combination or each of the following elements e.g., transistor, diode or the capacitor consider as a switch.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims rejected under 35 U.S.C. 103(a) as being unpatentable over Iwafuchi et al., hereinafter Iwafuchi US 2002/0096994 A1, and Hack et al. hereinafter Hack US 2002/0030647 A1, and further in view of Watanabe et al. , hereinafter Watanabe US 6476897 B1.

Claim 1.

Iwafuchi under summary of the invention paragraph 0016 teaches an image display unit including light emitting devices and methods of producing it. In this regard, his work provides improved image display units having enhanced characteristics such as resolution, image quality, and luminous efficiency, while facilitating formation of a large-sized screen, and reducing the

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production time and costs. An electro-optical panel, comprising: a plurality of data lines; a plurality of scanning lines. Iwafuchi in fig. 1 illustrates the following claim language: pixels provided in association with intersections, of the data lines and the scanning lines, the pixels each including. Iwafuchi in fig. 3 illustrates the following step of the claim invention: a hold capacitor that holds an electric charge. Iwafuchi at paragraph 0236 teaches the claim invention: an inverting device that outputs an output signal obtained by inverting an input signal.

Iwafuchi in fig. 3 a transistor 33 and capacitor 34 teaches the following step: a first switching element provided between the corresponding one of the data lines and the hold capacitor.

Iwafuchi in fig. 3 illustrates number of switches but Iwafuchi is silenced about using the organic light emitting diode, however Hack in fig. 3 illustrates an OLED element 310. However Hack in fig. 2 illustrates a sensor circuit 70 as an inverter that converts a signal from one stage to another stage. For the switching elements, Watanabe in fig. 12 illustrates the claim language and labeled it as 342, see following claim language: a second switching element provided between the hold capacitor and an input of the inverting device; a third switching element provided between the hold capacitor and an output of the inverting device. Watanabe in fig. 2 illustrates a transparent insulating substrate such as a glass substrate is used as the substrate 21, the pixel transistor 23 and the driving transistor 24 may be composed of polysilicon, amorphous silicon, or thin-film single-crystal silicon. These transistors may be formed by providing the selective oxide film 22 or by mesa separation by means of etching. Iwafuchi at paragraph 0029 teaches, a portion of the devices are selected from the group consisting of a light emitting device, a liquid crystal device, a photoelectric transfer device, a piezoelectric device, a thin film transistor device, a thin film diode, a resistance device, a switching device, a micro-magnetic device, and a micro-optical

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device, see following claim invention: an organic light-emitting diode element coupled to the output of the inverting device. Watanabe is silenced about the OLED; however, Watanabe mentioned a portion of device is consisting of a thin film diode and light emitting device, which they may be considered as organic light emitting diode or device. Because the electrons cross the junction they emit photons and photons is considered as an organic matter. Examiner's comments: Applicant should be able to specify the voltages require producing colors (e.g., Red, Blue and Green). Thus, it have been obvious to a person skill in the art at the time of the invention to substitute applicant 's described structure by modifying Watanabe's switching elements and Hack's OLED technology into Iwafuchi's work in order to provide benefits and advantages that are uniquely suited to use of amorphous silicon TFTs, this modification may also be used in combination with other types of thin film transistor technology including, for example, polysilicon, crystalline silicon, CdSe, and organic TFTs. By reducing the demanding performance characteristics that are typically required for TFTs in an AMOLED, it is believed that significant manufacturing and cost advantages may be realized for practical active matrix displays.

Claim 2.

The rejection of claim 1 can be applied to the rejection of claim 2.

Claim 3.

The rejection of claim 1 can be applied to the rejection of claim 3, but in the last line of the claim 3 claims "... an even number of times at a reading period" that does not explicitly specify the significant of having "an even number". Applicant needs to elaborate more about the claim language in next response.

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Claim 4.

Iwafuchi in fig. 3 illustrates switching elements each provided between each of the data lines and the capacitor. Iwafuchi in fig. 3 illustrates number of switches but does not explicitly specify the inverting device, however, Watanabe in fig. 12 illustrates the claim language and labeled it as 342, see following claim language: a second switching element provided between the hold capacitor and an input of the inverting device; a third switching element provided between the hold capacitor and an output of the inverting device. Iwafuchi at paragraph 0174 teaches that the capacitor 34 holds the gate voltage of the transistor 32. Even after the selecting operation of the address line ADD in the horizontal direction is stopped and thereby the potential of the selected address line is shifted again to the low level, that is, even after the transistor 33 is turned off, the capacitor 34 continuously holds the gate voltage. In principle, the capacitor 34 can continuously hold the gate voltage applied at the time of address selection until the next address selection occurs. During a period in which the capacitor 34 continuously holds the gate voltage, the transistor 32 can perform the operation associated with the voltage thus held, thereby continuously applying a drive current to the corresponding light emitting diode 31. By holding a light emission time of the light emitting diode 31 longer (as described above), a luminance of the entire image can be enhanced even if a drive current applied to each emitting diode is reduced. In claim 4 the last paragraph claims a state of the second switch element is off and the state of the third switch is on and perform one cycle operation for changing from the first state to the second state and then changing back to the first state, Examiner's comments: Applicant requires to specify the significant of changing the state of switches from "off" to "on" state or vise versa.

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The function of a switch is to turn “on” or “off” in respect to at least one cycle of operation. The significant of this part of the claim is not clear.

Claims 5 and 6.

The same argument of claim 4 applies to the claims 5 and 6.

Claim 7.

Applicant claims that the driving circuit includes a power supply that supplies high and low potential sources. The step is obvious because the function of a power supply is supplying at least low (ground means zero) and hi (means any value greater than zero) potentials. Examiner does not clear about what Applicant claims in claim 7.

Claim 8.

Iwafuchi in fig. 3 illustrates a P-channel and N-channel transistors.

Claim 9.

Iwafuchi in fig. 3 illustrates the claim language.

Claims 10-14.

The rejection of claims 10-14 is similar to the previous rejection of rejected claims.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid Amini


JEFFERY D. BRIER
PRIMARY EXAMINER

Javid A Amini
Examiner
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